

UNCLASSIFIED

504732

C-E-I-R, Inc.
Dugway Field Operation
Dugway Proving Ground
Dugway, Utah

SUBJECT: Review and Analysis

DATE: 30 March 1961

TO: Director, Technical Operations
Dugway Proving Ground
Dugway, Utah

1. Inclosed is the Review and Analysis of work done by C-E-I-R, Inc. under Contract No. 42-007-403-CML-431 at Dugway Field Operation and Los Angeles C-E-I-R Center during the period 26 January 1961 to 29 March 1961.

2. Titles included in this Review and Analysis are intended to comprise a complete listing of problems considered under this contract since 22 July 1959. Problems not of current interest will be omitted from subsequent Review and Analysis Reports.

3. Contents of this Review and Analysis Report are arranged in three main sections:

- I. Formal Programs (pp 1-6)
- II. Informal Programs of Current Nature (pp 7-38)
- III. Informal Programs Not of Current Nature (pp 39-68)

Within Section I problems appear in order of priority assignment. In Sections II and III problems are grouped by requesting organization and order of appearance within groups is determined by date of first request, with newest problems appearing first.

REGRADED UNCLASSIFIED by authority
(Identify Reclassification Authority)

P.G. HOMEYER
Project Director
C-E-I-R, Inc.

(Identify Reclassification Authority)

(Date of Change)

(Identify person who
accomplishes change)

UNCLASSIFIED


DPG-61-0653

q #9


JOD, DPG

REGRADED UNCLASSIFIED

- [REDACTED]
- (1) TITLE: Review of CW Spray Trials
 - (2) REQUESTED BY: An informal request has been made by TD&A and the Project Officer. A formal request is being prepared.
 - (3) FIRST REPORTED: 30 Mar 61
 - (4) PROBLEM: A preliminary and incomplete statement of the problem is to review and summarize previous CW spray testing and to prepare a bibliography on the subject.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT:
 - (a) Have made preliminary plan and work assignments for initial start on the problem.
 - (b) Have made a substantial start on preparing a bibliography. The present list includes Dugway, CWL, ORG, Suffield, and Tripartite reports; unpublished Dugway papers and manuscripts; and references given in many of these reports, papers, and manuscripts. This list includes about 150 references. In addition, we have received, at our request, approximately 1,000 references on "spray" from ASTIA. We have also received abstracts of most of these references.
 - (c) Have prepared a format for summarizing Dugway reports.
 - (d) Have read and summarized seven Dugway reports.
 - (e) Have read a paper by D. Boyle summarizing some of the spray work at Dugway. Have read a manuscript by Dr. Jackson on spray dissemination.
 - (f) Have had several discussions with CW Br, TD&A, staff members.
 - (6) WORK PLANNED FOR NEXT PERIOD:
 - (a) Work on this problem will be our major effort during the next period. It will be planned in more detail as soon as we receive a formal request giving the specific objectives.
 - (b) Preparation of a bibliography and reading and summarization of reports will be continued.
 - (7) COMMENTS: This problem has been assigned C-E-I-R Priority No. 1 by Project Officer (Director, Tech Opns). Work that has been done under the title, "CW Spray Trials" will be quite useful.
 - (8) ESTIMATED COMPLETION DATE: 31 Aug 61
- [REDACTED]


- 
- (1) TITLE: Dosage Build Up of E130 Type Bomblets *
- (2) REQUESTED BY: TD&A
- (3) FIRST REPORTED: Oct 59
- (4) PROBLEM: To accomplish build-ups involving single bomblet data, warhead data and data from multiple bomblet trials containing fewer bomblets than contained in one warhead.
- (5) OBJECTIVES:
- (a) To prepare a test design for field trials involving multiple bomblet patterns containing fewer bomblets than contained in a single warhead.
 - (b) To produce a mathematical model for calculations of warhead effects from single bomblet data and data from multiple bomblet static trials.
 - (c) To carry out the required build-ups from available data with the use of the mathematical model.
- (6) WORK ACCOMPLISHED SINCE LAST REPORT:
- (a) Study of "realistic" spacings for static multiple round tests was begun. Technical Note 3-61-2 summarizes early results.
 - (b) None
 - (c) Computer programs for estimation of parameters of single round Calder-Sutton model and derived "normal" multiple round model are being devised at Los Angeles Research Center. For preliminary numerical tests of model data from CW 408 (single round) trials has been received and processed at Dugway and sent to LARC for computing.
- (7) WORK PLANNED FOR NEXT PERIOD:
- (a) Spacings for non-uniform "normal" and "doughnut" patterns will be considered.
 - (b) Models for "doughnut" impact pattern with Calder-Sutton dosage pattern will be considered.
 - (c) Computations from CW 408 data will proceed and data from CW 444 (multiple round) trials will be processed.
- (8) COMMENTS: This problem has been assigned C-E-I-R priority no. 2 by Project Officer (Director, Tech Opns). Formal request dated 3 March 1961 received from Chief, TD&A.
- (9) ESTIMATED COMPLETION DATE: 1 September 1961.

* Previously reported under titles "Honest John Bomblet," "Build-Up" and "Build-Up of Single Point Source Data"




- [REDACTED]
- (1) TITLE: "Buildup" for E-134 Bomblet-Sergeant Missile System
 - (2) REQUESTED BY: TD&A Eng Test Br and BW Br
 - (3) FIRST REPORTED: Sep 60
 - (4) PROBLEM: To develop methods for prediction of warhead performance by combining results of warhead trials without agent and static firings of bomblets. (Subject to revision)
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT:
 - (a) Commencement of a study of feasibility of large scale buildup estimates by "Monte Carlo" techniques on a digital computer.
 - (b) Study of "realistic" spacings for static multiple round tests. Technical Note 3-61-2 was issued on this subject.
 - (c) Preliminary study of data from single round trials.
 - (6) WORK PLANNED FOR NEXT PERIOD: Continuation of (a) and (c) above.
 - (7) COMMENTS: This problem has been assigned C-E-I-R Priority No. 3 by Project Officer (Director, Tech Opns). A formal request for work is anticipated.
 - (8) ESTIMATED COMPLETION DATE: Indefinite
- [REDACTED]

- [REDACTED]
- (1) TITLE: BW Protective Additives
 - (2) REQUESTED BY: BW Lab Br
 - (3) FIRST REPORTED: Jun 60
 - (4) PROBLEM: To provide assistance in statistical design and analysis for experimentation on protective additives for BW agent. (Subject to revision).
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT:
 - (a) Analysis of chamber trials conducted from 23 Nov 60 to 6 Jan 61 has been completed. A draft technical note has been prepared.
 - (b) Consultation with requestor on design of current series of trials.
 - (6) WORK PLANNED FOR NEXT PERIOD:
 - (a) A technical note will be submitted.
 - (b) Analysis will begin as data becomes available.
 - (7) COMMENTS: This problem has been assigned C-E-I-R Priority No. 4 by Project Officer (Director, Tech Opns). A formal request is anticipated.
 - (8) ESTIMATED COMPLETION DATE:
 - (a) 10 April 61
 - (b) Indefinite
- [REDACTED]



- 
- (1) TITLE: Target Climatology
- (2) REQUESTED BY: Met Div
- (3) FIRST REPORTED: Jul 60
- (4) PROBLEM: To assist in statistical and data processing aspects of the development of a system for prediction of probability of occurrence of various combinations of meteorological conditions. (Subject to revision).
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: This problem has been assigned C-E-I-R Priority No. 5 by Project Officer (Director, Tech Opns). A formal request is anticipated.
- (8) ESTIMATED COMPLETION DATE: Indefinite


JOD, DPG

REGRADED UNCLASSIFIED

- 
- (1) TITLE: Correlation of Environmental Test Data *
- (2) REQUESTED BY: ETD
- (3) FIRST REPORTED: Jan 61
- (4) PROBLEM: To establish methods of preparing environmental field test data for automatic data processing.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: Several conferences with requestor on IBM card format and data processing procedures.
- (6) WORK PLANNED FOR NEXT PERIOD: More detailed study of current ETD plans for data processing. Examination of typical draft test plans to determine adequacy of proposed methods.
- (7) COMMENTS: This problem has been assigned C-E-I-R priority No. 6 by Project Officer (Director, Tech Opns). A formal request is anticipated.
- (8) ESTIMATED COMPLETION DATE: Jun 61


* Title to be changed upon receipt of formal request.

- 
- (1) TITLE: Viral Simulants
- (2) REQUESTED BY: TD&A BW Br
- (3) FIRST REPORTED: Sep 60
- (4) PROBLEM: To examine relationships between observed recoveries of tracers, simulants and agents and to estimate probable spray-tank dissemination characteristics for viral and rickettsial agents based on these relationships and on related aerosol chamber data.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: Examination of data from BW 566 trials as it becomes available.
- (7) COMMENTS: None
- (8) ESTIMATED COMPLETION DATE: Indefinite
- 

- 
- (1) TITLE: Bellwether II
 - (2) REQUESTED BY: TD&A BW Br
 - (3) FIRST REPORTED: Jul 60
 - (4) PROBLEM: To provide technical assistance in statistical design and analysis for Project Bellwether II.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: Consultations and informal recommendations on analysis and reporting of results.
 - (6) WORK PLANNED FOR NEXT PERIOD: Review final report of requestor.
 - (7) COMMENTS: None
 - (8) ESTIMATED COMPLETION DATE: April



JOD, DPG

REGRADED UNCLASSIFIED

- 
- (1) TITLE: Computation of Area-Dosage Curves
- (2) REQUESTED BY: TD&A BW Br
- (3) FIRST REPORTED: Apr 60
- (4) PROBLEM: To derive statistically valid methods for evaluating
an area-dosage curve.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: None
- (8) ESTIMATED COMPLETION DATE: Indefinite

JOD, DPG

REGRADED UNCLASSIFIED

- 
- (1) TITLE: Biological Decay
- (2) REQUESTED BY: TD&A BW Br
- (3) FIRST REPORTED: Nov 59
- (4) PROBLEM:
- (a) To propose and evaluate models for biological decay and to study methods for estimation of parameters of such models.
 - (b) To relate chamber results with those obtained in field tests.
 - (c) To study the relationship between particle size and biological decay.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: This problem is somewhat extensive. The amount of further effort, if any, to be expended by C-E-I-R should be considered.
- (8) ESTIMATED COMPLETION DATE: Indefinite
- 

-
- (1) TITLE: Assignment of Field Samplers for Multiple Round Tests
 - (2) REQUESTED BY: TD&A CW Br
 - (3) FIRST REPORTED: Mar 60
 - (4) PROBLEM: To derive optimal sampler locations for study of the dosage pattern in the impact area of a multiple-round system.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
 - (6) WORK PLANNED FOR NEXT PERIOD: A report summarizing C-E-I-R work on this problem will be prepared as priorities permit.
 - (7) COMMENTS: None
 - (3) ESTIMATED COMPLETION DATE: Indefinite



JOD, DPG


REGRADED UNCLASSIFIED

- [REDACTED]
- (1) TITLE: CW 442 Spray Trials
 - (2) REQUESTED BY: TD&A CW Br
 - (3) FIRST REPORTED: Sep 59
 - (4) PROBLEM: To evaluate alternative methods of analysis of field test data from airborne spray systems.
 - (5) OBJECTIVES:
 - {a} To study the method of analysis used in DPGR-247
 - {b} To devise alternative methods of analysis
 - {c} To devise a procedure for the assessment of stain cards and to apply the procedure to the horizontal stain cards of test series CW-442
 - {d} To compare the alternative methods of analysis on the basis of test data.
 - (6) WORK ACCOMPLISHED SINCE LAST REPORT:
 - {a} Essentially completed prior to current report period.
 - {b} Broad outlines of several alternatives constructed prior to current report period
 - {c} Objective completed prior to current report period
 - {d} Computations common to several of the proposed analysis procedures have been essentially completed. Several sets of computations have been examined from the standpoint of mutual consistency and consideration has been given to cases in which the degree of consistency compared unfavorably with anticipated sampling variability. Further calculations were initiated to resolve the discrepancies. A first draft of parts of the work completed was started.
 - (7) WORK PLANNED FOR NEXT PERIOD: The computational aspects of the program will be completed and a draft report prepared. Expert meteorological advice will be sought for certain aspects of the study.
 - (8) COMMENTS: The work has been done primarily at the Los Angeles Research Center, with library support by the Dugway Field Office.
 - (9) ESTIMATED COMPLETION DATE: 1 Jun 61
- [REDACTED]

- [REDACTED]
- (1) TITLE: Comparative Testing of Cast and Extruded M55 Rocket Propellant Grain
 - (2) REQUESTED BY: TD&A Eng Test Br
 - (3) FIRST REPORTED: Nov 60
 - (4) PROBLEM:
 - (a) Provide statistical assistance in test design for comparison of cast and extruded propellant grain.
 - (b) Evaluate test data to determine ballistic similitude of rockets with extruded and cast propellant grain.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT:
 - (a) Consultation with Eng Test Br in test design.
 - (b) None
 - (6) WORK PLANNED FOR NEXT PERIOD:
 - (a) None
 - (b) Evaluate data as it becomes available.
 - (7) COMMENTS: None
 - (8) ESTIMATED COMPLETION DATE: Indefinite
- [REDACTED]



- [REDACTED]
- (1) TITLE: Comparative Engineering Test of CS-Filled Riot Grenades
 - (2) REQUESTED BY: TD&A Eng Test Br, CW Opns Div
 - (3) FIRST REPORTED: Nov 59
 - (4) PROBLEM:
 - (a) Provide statistical assistance in test design for testing of M7A1, M7A2, M7A2-Modified and M25A2 riot grenades.
 - (b) Provide assistance in analysis of test technology trial data.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
 - (6) WORK PLANNED FOR NEXT PERIOD: None
 - (7) COMMENTS: None
 - (8) ESTIMATED COMPLETION DATE: Indefinite
- [REDACTED]


- 
- (1) TITLE: High-Speed Computing
 - (2) REQUESTED BY: TD&A
 - (3) FIRST REPORTED: May 60
 - (4) PROBLEM: To provide technical assistance in efficient computer utilization.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: Work was started at Los Angeles on preparation of IBM 1620 computer program for analyzing bio-assay data by probit and logit techniques.
 - (6) WORK PLANNED FOR NEXT PERIOD: Work will continue on the probit and logit programs.
 - (7) COMMENTS: A continuing problem.
 - (8) ESTIMATED COMPLETION DATE: Not applicable.
- 

- 
- (1) TITLE: Pibal Data Processing
 - (2) REQUESTED BY: TD&A Computer Section, Met Div
 - (3) FIRST REPORTED: Nov 59
 - (4) PROBLEM: To develop machine data processing techniques for both single- and multiple-theodolite data.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: An IBM 1620 computer program for processing single-theodolite data was prepared at Los Angeles.
 - (6) WORK PLANNED FOR NEXT PERIOD: A similar program for processing multiple-theodolite data will be prepared at Los Angeles.
 - (7) COMMENTS: None
 - (8) ESTIMATED COMPLETION DATE: May 61

JOD, DPG


REGRADED UNCLASSIFIED

- 
- (1) TITLE: Persistence of BW Agents in the Soil
 - (2) REQUESTED BY: BW Lab Br
 - (3) FIRST REPORTED: Mar 61
 - (4) PROBLEM: To provide statistical advice on design of experiments for studying persistence of BW agents in the soil.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: Several consultations with BW Lab personnel. Some general recommendations for a design based on the 'split-plot' principle were made.
 - (6) WORK PLANNED FOR NEXT PERIOD: Additional work will depend on further requests.
 - (7) COMMENTS: None
 - (8) ESTIMATED COMPLETION DATE: Indefinite
- 

- 
- (1) TITLE: Uranine as a Tracer
- (2) REQUESTED BY: BW Lab Br
- (3) FIRST REPORTED: Aug 60
- (4) PROBLEM: To provide statistical advice on experimentation designed to evaluate the potential usefulness of uranine as a tracer.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: Completion of analysis from four chamber runs employing Andersen Samplers to sample aerosols containing B.g. and uranine. Consultation on methods of analysis and presentation of data.
- (6) WORK PLANNED FOR NEXT PERIOD: Preparation of note on analysis of experimental results, if priorities permit.
- (7) COMMENTS: None
- (8) ESTIMATED COMPLETION DATE: Indefinite

JOD, DPG

REGRADED UNCLASSIFIED

- 
- (1) TITLE: Estimation of Agent-Tracer Ratios
- (2) REQUESTED BY: BW Lab Br, TD&A BW Br
- (3) FIRST REPORTED: Aug 60
- (4) PROBLEM: To compare estimates of agent-tracer aerosol recovery ratios at fixed downwind distances obtained by (i) arithmetically combining estimates from individual samplers, and (ii) physically combining contents of samplers to make single estimate, and to determine which method, if either, is superior for routine analysis.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: None
- (8) ESTIMATED COMPLETION DATE: Indefinite


JOD, DPG

REGRADED UNCLASSIFIED

-
- (1) TITLE: BW Field Quality Control
 - (2) REQUESTED BY: BW Opns
 - (3) FIRST REPORTED: Aug 60
 - (4) PROBLEM: To provide statistical assistance in the development and operation of field quality control program.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: Consultations on methods for checking functioning of sampling equipment in agent trials.
 - (6) WORK PLANNED FOR NEXT PERIOD: Continued consultation at request of BW Field Quality Control.
 - (7) COMMENTS: A continuing program.
 - (8) ESTIMATED COMPLETION DATE: Not applicable.


JOD, DPG

REGRADED UNCLASSIFIED

- 
- (1) TITLE: Rapid Assay of Virulence
- (2) REQUESTED BY: BW Lab Br
- (3) FIRST REPORTED: Jun 60
- (4) PROBLEM: To relate ratio of recovery on two media to virulence of agent batch and, if possible, to separate the effect of virulence from that of age of culture.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: Additional data has been received from BW Lab Br and analysis has been started. Progress has been delayed due to work of higher priority.
- (6) WORK PLANNED FOR NEXT PERIOD: Complete analysis of data received as priorities permit.
- (7) COMMENTS: None
- (8) ESTIMATED COMPLETION DATE: April, for present phase.



JOD, DPG

REGRADED UNCLASSIFIED


- 
- (1) TITLE: Comparison of Growth Media
 - (2) REQUESTED BY: BW Lab Br
 - (3) FIRST REPORTED: Jan 60
 - (4) PROBLEM: To provide statistical analysis of data on alternative plating media for various organisms.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: Data for comparison of PDM with standard media for several organisms have been received and analyzed.
 - (6) WORK PLANNED FOR NEXT PERIOD: Prepare and submit report on PDM.
 - (7) COMMENTS: None
 - (8) ESTIMATED COMPLETION DATE: 7 Apr 61

-
- (1) TITLE: Effect of Sunlight on BW Agent
 - (2) REQUESTED BY: BW Lab Br, TD&A BW Br
 - (3) FIRST REPORTED: Dec 59
 - (4) PROBLEM: Evaluation of data from a preliminary experiment on effect of sunlight on BW agent.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: Discussion of previous analysis with BW Laboratory personnel.
 - (6) WORK PLANNED FOR NEXT PERIOD: Some additional estimates will be obtained and reported.
 - (7) COMMENTS: None
 - (8) ESTIMATED COMPLETION DATE: April

- [REDACTED]
- (1) TITLE: Andersen Sampler
 - (2) REQUESTED BY: BW Lab Br
 - (3) FIRST REPORTED: Oct 59
 - (4) PROBLEM: To examine statistical aspects of estimation of particle size distributions by use of the Andersen Sampler.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT:
 - (a) Completion of a study and evaluation of alternative mathematical methods for the positive hole count technique, including confidence interval as well as point estimates for the number of particles sampled. A draft memorandum was written.
 - (b) Completion of a study on the estimation of parameters of lognormal distributions from Andersen Sampler data. A draft memorandum was written.
 - (6) WORK PLANNED FOR NEXT PERIOD:
 - (a) Tables for confidence interval estimation will be computed if priorities permit. Preparation of final memorandum will be delayed until Mr. White's return from leave.
 - (b) Draft memorandum will be revised to employ results of previous calibration studies, as priorities permit.
 - (7) COMMENTS: Initially C-E-I-R was asked to investigate Andersen Sampler estimation techniques developed by DPG personnel. Since completion of that work other studies have been instituted by C-E-I-R as the necessity arose in connection with other problems.
 - (8) ESTIMATED COMPLETION DATE: Indefinite
- [REDACTED]


- 
- (1) TITLE: Evaluation of Impinger Collection Solutions
- (2) REQUESTED BY: BW Lab Br
- (3) FIRST REPORTED: Sep 59
- (4) PROBLEM: To assist in design and analysis of experiments to estimate the effects of proposed collection solutions and to compare such solutions with present standards.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: Effort is expended on this problem as specific requests arise.
- (8) ESTIMATED COMPLETION DATE: Not applicable.
- 

- [REDACTED]
- (1) TITLE: CW Field Sampler Heterogeneity
 - (2) REQUESTED BY: CW Opns
 - (3) FIRST REPORTED: Sep 60
 - (4) PROBLEM:
 - (a) To characterize and estimate the extent of variation between duplicate filter paper samplers in CW field tests.
 - (b) To determine the effect of such variability on estimates of total recovery and area coverage.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: Technical Note 3-61-3 summarizing C-E-I-R work on this problem has been prepared and submitted.
 - (6) WORK PLANNED FOR NEXT PERIOD: None
 - (7) COMMENTS: Tech Note 3-61-3 suggests possible further studies, but no additional work is planned without further requests.
 - (8) ESTIMATED COMPLETION DATE: Completed
- [REDACTED]

- 
- (1) TITLE: Aerosol Particulate Sizing
(2) REQUESTED BY: CW Opns
(3) FIRST REPORTED: Sep 60
(4) PROBLEM: To evaluate techniques in sizing aerosol particulates.
(5) WORK ACCOMPLISHED SINCE LAST REPORT: None
(6) WORK PLANNED FOR NEXT PERIOD: None
(7) COMMENTS: None
(8) ESTIMATED COMPLETION DATE: Indefinite



JOD, DPG


REGRADED UNCLASSIFIED

- 
- (1) TITLE: CW Lab Analytic Problems
- (2) REQUESTED BY: CW Opns
- (3) FIRST REPORTED: Sep 60
- (4) PROBLEM: To review and evaluate existing mathematical and statistical techniques employed in routine analytic procedures.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: Effort is expended on this problem as specific requests arise.
- (8) ESTIMATED COMPLETION DATE: Not applicable.

JOD, DPG

REGRADED UNCLASSIFIED

- 
- (1) TITLE: Spot Counting and Sizing
 - (2) REQUESTED BY: CW Opns, TD&A CW Br
 - (3) FIRST REPORTED: Jun 60
 - (4) PROBLEM: Assist in large-scale effort in obtaining size frequencies of spots produced on printflex cards.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: A method for partially correcting bias due to overlap has been devised. Report has been written in draft form.
 - (6) WORK PLANNED FOR NEXT PERIOD: Completion and submission of above report as a technical note.
 - (7) COMMENTS: None
 - (8) ESTIMATED COMPLETION DATE: Indefinite
- 

- 
- (1) TITLE: CW Field Quality Control
- (2) REQUESTED BY: CW Opns, CW Field Quality Control Office
- (3) FIRST REPORTED: Mar 60
- (4) PROBLEM: To provide technical assistance in the development and operation of methods for inspection of field sampler set-outs for the purpose of maintaining and improving acceptable quality.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: Prepared and submitted to Director, Tech Opns "Comments on Draft Quality Control Plans for V Grid, East Tower Grid and CCB Grid."
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: This problem is on a continuing basis, with additional work as requested.
- (8) ESTIMATED COMPLETION DATE: Not applicable.

JOD, DPG

REGRADED UNCLASSIFIED

[REDACTED]

(1) TITLE: Comparison of CW Agent Collectors (CW Test Technology Field Experiments)

(2) REQUESTED BY: CW Opns

(3) FIRST REPORTED: Dec 59

(4) PROBLEM:

- (a) To determine the sampling array required for a satisfactory check of prediction equations.
- (b) To determine by comparison the most suitable sampler for fallout sampling.
- (c) To obtain data relating a mannikin sampler to other droplet collectors.
- (d) To determine the optimum sampling array for munition evaluation.



(5) WORK ACCOMPLISHED SINCE LAST REPORT: None


(6) WORK PLANNED FOR NEXT PERIOD: None

(7) COMMENTS: Since this problem requires a major effort, it is suggested that a formal request through the project officer is desirable. An interim priority assignment is also desirable.

(8) ESTIMATED COMPLETION DATE: Indefinite

[REDACTED]


- 
- (1) TITLE: Environmental Test Site Meteorological Summary
- (2) REQUESTED BY: ETD
- (3) FIRST REPORTED: Mar 61
- (4) PROBLEM: To prepare test site meteorological data for automatic data processing and to develop a computer program for use in met report preparation.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: Discussions with ETD personnel on requirements of problem.
- (6) WORK PLANNED FOR NEXT PERIOD: Commencement of actual data preparation. Detailed survey of information required for met report. Referral to Los Angeles for program development.
- (7) COMMENTS: A formal request is anticipated. Priority assignment may be desirable.
- (8) ESTIMATED COMPLETION DATE: 30 Jun 61
- 

- 
- (1) TITLE: Analysis of Environmental Field Testing Program
- (2) REQUESTED BY: ETD
- (3) FIRST REPORTED: Oct 60
- (4) PROBLEM: To determine if the current testing regime could be shortened and/or the interval between tests altered to improve the effectiveness of the program.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: A draft technical memorandum, "An Evaluation of the Environmental Test Program", summarizing C-E-I-R effort was prepared and submitted to ETD for comment. A final memorandum is being prepared.
- (6) WORK PLANNED FOR NEXT PERIOD: Completion of final memorandum.
- (7) COMMENTS: DF of 11 Oct 1960 is on file.
- (8) ESTIMATED COMPLETION DATE: April

REGRADED UNCLASSIFIED



JOD, DPG

- [REDACTED]
- (1) TITLE: Characteristics of 8 Inch Howitzer and T-174 Shell
 - (2) REQUESTED BY: Tech Svcs
 - (3) FIRST REPORTED: Jun 60
 - (4) PROBLEM:
 - (a) To characterize and estimate the extent of variation in impact coordinates of T-174 shells.
 - (b) To recommend a firing test to estimate required corrections in transfer during agent trials, as well as probable deviation from aiming point of single rounds fired after transfer.
 - (c) To calculate the range of maximum accuracy of weapon for use in test design.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
 - (6) WORK PLANNED FOR NEXT PERIOD: None
 - (7) COMMENTS: Effort will be expended on data analysis if requested.
 - (8) ESTIMATED COMPLETION DATE: Completed, for present phases.
- [REDACTED]

- 
- (1) TITLE: Numerical Integration of Diffusion Equations
- (2) REQUESTED BY: Initiated by C-E-I-R
- (3) FIRST REPORTED: Mar 61
- (4) PROBLEM: To describe the use of numerical integration techniques for prediction of CW and BW munition performance and possible application in test design and analysis.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: A draft technical note of an expository nature has been prepared.
- (6) WORK PLANNED FOR NEXT PERIOD: Technical note will be submitted.
- (7) COMMENTS: None
- (8) ESTIMATED COMPLETION DATE: Indefinite

JOD, DPG


REGRADED UNCLASSIFIED

- 
- (1) TITLE: Crosswind Interpolation for Missing Field Data
- (2) REQUESTED BY: Initiated by C-E-I-R
- (3) FIRST REPORTED: Mar 61
- (4) PROBLEM: To describe an improved technique for interpolation of missing data in field trials.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: Observation of estimates for missing field data obtained by linear interpolation suggested that curvilinear interpolation is more desirable. Study of the problem indicated the utility of polynomial interpolation from considerations of empirical adequacy, theoretical justification and ease of application. The method of polynomial interpolation was described to personnel of TD&A BW Br.
- (6) WORK PLANNED FOR NEXT PERIOD: A technical note on quadratic interpolation will be prepared, priorities permitting.
- (7) COMMENTS: None
- (8) ESTIMATED COMPLETION DATE: Indefinite
- 

- [REDACTED]
- (1) TITLE: Organism Size and BW Agent Recovery
 - (2) REQUESTED BY: Initiated by C-E-I-R
 - (3) FIRST REPORTED: Nov 60
 - (4) PROBLEM: To study theoretically and with available field and chamber data the relationships among organism size, particle size distribution and recovery of BW agents and tracers.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
 - (6) WORK PLANNED FOR NEXT PERIOD: As priorities permit, to issue as notes or memoranda the results of previous work and to continue the studies.
 - (7) COMMENTS: This problem is associated with those titled "Viral Simulants", "Uranine as a Tracer" and "Andersen Sampler".
 - (8) ESTIMATED COMPLETION DATE: Indefinite


JOD, DPG

REGRADED UNCLASSIFIED

- 
- (1) TITLE: An Alternative Measure of Virulence
- (2) REQUESTED BY: Initiated by C-E-I-R
- (3) FIRST REPORTED: Oct 60
- (4) PROBLEM: To develop and describe a measure of virulence of minute organisms alternative to median effective dose.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: Revision of a previous draft report has been started. Auxilliary tables for estimation were computed at Los Angeles.
- (6) WORK PLANNED FOR NEXT PERIOD: As priorities permit, to complete the revision and submit a final report.
- (7) COMMENTS: Application of this analysis technique has been described to personnel of BW Lab Br and TD&A BW Br. The technique has been found useful and adopted by TD&A for some purposes.
- (8) ESTIMATED COMPLETION DATE: Indefinite


JOD, DPG

REGRADED UNCLASSIFIED

- 
- (1) TITLE: Computer Survey
- (2) REQUESTED BY: Deputy Commander of Scientific Activities and
Project Officer
- (3) FIRST REPORTED: Dec 59
- (4) PROBLEM: To make a survey of current and potential use of
electronic and auxiliary data processing equipment at
DPG and to submit a formal report on findings and recom-
mendations.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: The work on this problem has been completed and a
final report was submitted in March 1960.
- (8) ESTIMATED COMPLETION DATE: Completed


JOD, DPG

REGRADED UNCLASSIFIED

- 
- (1) TITLE: Relationships Between Travel Time and Agent Dosage
- (2) REQUESTED BY: TD&A BW Br
- (3) FIRST REPORTED: Sep 60
- (4) PROBLEM: To develop a function to describe empirically the relationship between dosage and travel time for a test series.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
- (3) ESTIMATED COMPLETION DATE: Completed


JOD, DPG

REGRADED UNCLASSIFIED

- 
- (1) TITLE: Compaction of Dry Materials
- (2) REQUESTED BY: TD&A BW Br
- (3) FIRST REPORTED: Feb 60
- (4) PROBLEM: To assist in design and analysis of an experiment to study the extent and rate of compaction of various powdered materials.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
- (8) ESTIMATED COMPLETION DATE: Completed

JOD, DPG

REGRADED UNCLASSIFIED

- 
- (1) TITLE: "Buildup" from Boeing Dispenser
- (2) REQUESTED BY: TD&A BW Br
- (3) FIRST REPORTED: Dec 59
- (4) PROBLEM: To relate dosages from individually functioned
dynamic bomblet trials to that obtained from the Boeing
Dispenser.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: C-E-I-R proposes to omit this problem from current
program.
- (8) ESTIMATED COMPLETION DATE: Discontinued

REGRADED UNCLASSIFIED

JOD, DPG

[REDACTED]

(1) TITLE: Bellwether I

(2) REQUESTED BY: TD&A BW Br

(3) FIRST REPORTED: Oct 59

(4) PROBLEM:

- (a) To assist in designing a series of preliminary trials to develop field techniques, to estimate the relative importance of several factors, and to estimate the activity of vectors under varying conditions.
- (b) To develop a mathematical model for predicting vector activity.
- (c) To develop statistical methods and to prepare the necessary computer programs for analyzing the data obtained in the completed trials.
- (d) To perform the computer computations and to assist in the interpretation of the results.


(5) WORK ACCOMPLISHED SINCE LAST REPORT: None

(6) WORK PLANNED FOR NEXT PERIOD: None

(7) COMMENTS: All phases of the problem were completed in April 1960.


(8) ESTIMATED COMPLETION DATE: Completed


[REDACTED]

- 
- (1) TITLE: FP Dissemination Calibration Trials
 - (2) REQUESTED BY: TD&A
 - (3) FIRST REPORTED: Sep 59
 - (4) PROBLEM: Study and propose methods for decreasing the variability in rate of FP dissemination for Windsoc trials.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
 - (6) WORK PLANNED FOR NEXT PERIOD: None
 - (7) COMMENTS: This problem will be omitted from current program.
 - (8) ESTIMATED COMPLETION DATE: Completed

JOD, DPG


REGRADED UNCLASSIFIED

- 
- (1) TITLE: Impaction Efficiency of Cylinders
- (2) REQUESTED BY: TD&A CW Br
- (3) FIRST REPORTED: May 60
- (4) PROBLEM: To relate wind speed, droplet size distribution and cylinder size in order to investigate droplet size distribution and contamination density on cylinders of varying sizes.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: Work on this problem has been suspended.
- (8) ESTIMATED COMPLETION DATE: Not applicable.

- 
- (1) TITLE: Evaluation of Myosis-Producing Effect of CW Agent
- (2) REQUESTED BY: TD&A CW Br
- (3) FIRST REPORTED: Apr 60
- (4) PROBLEM: To extrapolate dosage-myosis production results in areas of measurable dosage into areas of non-measurable dosage so as to relate dosage to myosis produced.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: None
- (8) ESTIMATED COMPLETION DATE: Completed



REGRADED UNCLASSIFIED


JOD, DPG

- 
- (1) TITLE: Arctic Testing Problem
 - (2) REQUESTED BY: TD&A CW Br
 - (3) FIRST REPORTED: Oct 59
 - (4) PROBLEM: Propose a sampling design for estimating loss of agent from mines detonated in snow.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
 - (6) WORK PLANNED FOR NEXT PERIOD: None
 - (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
 - (8) ESTIMATED COMPLETION DATE: Completed

REGRADED UNCLASSIFIED


JOD, DPG

- 
- (1) TITLE: Area Pickup
- (2) REQUESTED BY: TD&A CW Br
- (3) FIRST REPORTED: Sep 59
- (4) PROBLEM:
- (a) Devise a series of trials to evaluate the effect of terrain, time after dissemination, distance from source, knowledge of contamination and troop activity on the quantity of simulant picked up by troops.
 - (b) Determine the feasibility of trials with agent and design such trials for the purpose of confirming that the assumed simulant is a true simulant.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: Work on this problem has been suspended.
- (8) ESTIMATED COMPLETION DATE: Not applicable.
- 

- 
- (1) TITLE: Final Engineering Test of 4.2 Inch Mortar Shell
 - (2) REQUESTED BY: TD&A Eng Test Br
 - (3) FIRST REPORTED: Nov 60
 - (4) PROBLEM: To assist in design of final engineering test.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
 - (6) WORK PLANNED FOR NEXT PERIOD: None
 - (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
 - (8) ESTIMATED COMPLETION DATE: Completed


REGRADED UNCLASSIFIED

JOD, DPG

- 
- (1) TITLE: Final Engineering Test of E22 and T57-5 Protective Gloves
- (2) REQUESTED BY: TD&A Eng Test Br
- (3) FIRST REPORTED: Jul 60
- (4) PROBLEM: Statistical analysis of data on several characteristics of gloves following chamber storage and decontamination treatments.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
- (8) ESTIMATED COMPLETION DATE: Completed


REGRADED UNCLASSIFIED

JOD, DPG

- 
- (1) TITLE: Final Engineering Test of 6 Inch Smoke Shell
 - (2) REQUESTED BY: TD&A Eng Test Br
 - (3) FIRST REPORTED: May 60
 - (4) PROBLEM: To assist in design of final engineering test.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
 - (6) WORK PLANNED FOR NEXT PERIOD: None
 - (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
 - (8) ESTIMATED COMPLETION DATE: Completed


JOD, DPG

REGRADED UNCLASSIFIED

- 
- (1) TITLE: Final Engineering Test of E25R2 Sampling Kit
- (2) REQUESTED BY: TD&A Eng Test Br
- (3) FIRST REPORTED: May 60
- (4) PROBLEM: Analysis of data on sampling kit.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
- (3) ESTIMATED COMPLETION DATE: Completed


JOD, DPG


REGRADED UNCLASSIFIED


- 
- (1) TITLE: Final Engineering Test of Protective Suits
 - (2) REQUESTED BY: TD&A Eng Test Br
 - (3) FIRST REPORTED: Apr 60
 - (4) PROBLEM: To assist in data analysis, including statistically valid treatment of missing data.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
 - (6) WORK PLANNED FOR NEXT PERIOD: None
 - (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
 - (8) ESTIMATED COMPLETION DATE: Completed

JOD, DPG

REGRADED UNCLASSIFIED


- 
- (1) TITLE: Final Engineering Test of Five-Man Gas-Particulate Filter Unit
 - (2) REQUESTED BY: TD&A Eng Test Br
 - (3) FIRST REPORTED: Jan 60
 - (4) PROBLEM: Evaluation of test plan for final engineering test of this item.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
 - (6) WORK PLANNED FOR NEXT PERIOD: None
 - (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
 - (8) ESTIMATED COMPLETION DATE: Completed

- 
- (1) TITLE: Final Engineering Test of Gas Masks
 - (2) REQUESTED BY: TD&A Eng Test Br
 - (3) FIRST REPORTED: Dec 59
 - (4) PROBLEM: Analysis and summary of data on rough-handling and chamber treatments of six sizes of masks in three containers.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
 - (6) WORK PLANNED FOR NEXT PERIOD: None
 - (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
 - (8) ESTIMATED COMPLETION DATE: Completed

- 
- (1) TITLE: E86R2 Cluster Adapter
- (2) REQUESTED BY: TD&A Eng Test Br and BW Br
- (3) FIRST REPORTED: Dec 59
- (4) PROBLEM: To obtain confidence limits for the probability that cluster adapter and agent container will both function, using data on failures of each separately.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
- (8) ESTIMATED COMPLETION DATE: Completed


JOD, DPG

REGRADED UNCLASSIFIED

- 
- (1) TITLE: Quality Control of Plating Media
 - (2) REQUESTED BY: BW Lab Br
 - (3) FIRST REPORTED: Dec 60
 - (4) PROBLEM: To devise a quality control plan for surveillance of quality of prepared plates.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
 - (6) WORK PLANNED FOR NEXT PERIOD: None
 - (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
 - (3) ESTIMATED COMPLETION DATE: Completed


JOD, DPG

REGRADED UNCLASSIFIED

- 
- (1) TITLE: Particle Size and Infectivity
 - (2) REQUESTED BY: BW Lab Br
 - (3) FIRST REPORTED: Oct 60
 - (4) PROBLEM: To consider experimental and mathematical approaches to the problem of relating particle size to infectivity for BW aerosols.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
 - (6) WORK PLANNED FOR NEXT PERIOD: None
 - (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
 - (8) ESTIMATED COMPLETION DATE: Indefinite


REGRADED UNCLASSIFIED


JOD, DPG

- 
- (1) TITLE: Evaluation of Chamber-Sampling Technique
 - (2) REQUESTED BY: BW Lab Br
 - (3) FIRST REPORTED: Apr 60
 - (4) PROBLEM: To evaluate the importance of port differences in sampling chamber clouds using sodium fluorescein.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
 - (6) WORK PLANNED FOR NEXT PERIOD: None
 - (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
 - (8) ESTIMATED COMPLETION DATE: Completed

REGRADED UNCLASSIFIED


JOD, DPG

- 
- (1) TITLE: Impinger Evaluation
- (2) REQUESTED BY: BW Lab Br
- (3) FIRST REPORTED: Feb 60
- (4) PROBLEM: To estimate counting errors introduced by losses in
Impinger due to handling, secondary aerosol formation
and other factors.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: Work on this problem has been suspended.
- (8) ESTIMATED COMPLETION DATE: Not applicable.

- 
- (1) TITLE: Non-monotonic Response Curves
 - (2) REQUESTED BY: BW Lab Br
 - (3) FIRST REPORTED: Nov 59
 - (4) PROBLEM: To derive a model for explanation of non-monotonic (not graded) response to increasing dosages and to develop statistical methods for treating such data.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
 - (6) WORK PLANNED FOR NEXT PERIOD: None
 - (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
 - (8) ESTIMATED COMPLETION DATE: Completed


JOD, DPG

REGRADED UNCLASSIFIED

- 
- (1) TITLE: Dietary Effects on Irradiated Mice
 - (2) REQUESTED BY: BW E&E Br
 - (3) FIRST REPORTED: Jul 60
 - (4) PROBLEM: To assist in the design of an experiment to assess long-term effects of diet and irradiation on mice.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
 - (6) WORK PLANNED FOR NEXT PERIOD: None
 - (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
 - (8) ESTIMATED COMPLETION DATE: Completed


JOD, DPG

REGRADED UNCLASSIFIED

- 
- (1) TITLE: Experimental 155 mm Shell
- (2) REQUESTED BY: CW Opns
- (3) FIRST REPORTED: Jan 60
- (4) PROBLEM: To propose and develop data processing and analysis techniques for field testing of this munition.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
- (8) ESTIMATED COMPLETION DATE: Completed

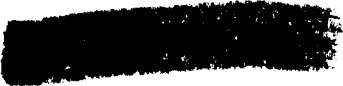
JOD, DPG

REGRADED UNCLASSIFIED

- 
- (1) TITLE: Reliability of Laboratory Assays of CW Agents
- (2) REQUESTED BY: CW Anal Lab
- (3) FIRST REPORTED: Jan 60
- (4) PROBLEM: To determine the nature and degree of assay bias
from assay of a sequence of known concentrations.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: C-E-I-R proposes to omit this problem from current
program.
- (8) ESTIMATED COMPLETION DATE: Completed

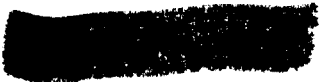
JOD, DPG


REGRADED UNCLASSIFIED

- 
- (1) TITLE: Quality Control for CW Lab Agent Determinations
- (2) REQUESTED BY: CW Anal Lab
- (3) FIRST REPORTED: Nov 59
- (4) PROBLEM: To obtain measures of bias and/or variability in analytic procedures and to isolate causes of inaccurate data.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
- (8) ESTIMATED COMPLETION DATE: Completed

JOD, DPG

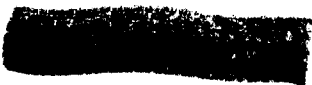
REGRADED UNCLASSIFIED

- 
- (1) TITLE: Confidence Limits for Calibration Curves
- (2) REQUESTED BY: CW Anal Lab
- (3) FIRST REPORTED: Oct 59
- (4) PROBLEM: To obtain a method for calculating confidence limits on the concentration corresponding to an observed colorimeter reading.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
- (8) ESTIMATED COMPLETION DATE: Completed

- 
- (1) TITLE: Snow Compaction
 - (2) REQUESTED BY: ETD
 - (3) FIRST REPORTED: Jan 60
 - (4) PROBLEM: To design an experiment to determine the pressure gradient inside a snow structure sufficient for protection, considering such factors as particle size and degree of compaction.
 - (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
 - (6) WORK PLANNED FOR NEXT PERIOD: None
 - (7) COMMENTS: C-E-I-R proposes to omit this problem from current program.
 - (8) ESTIMATED COMPLETION DATE: Completed

JOD, DPG

REGRADED UNCLASSIFIED

- 
- (1) TITLE: Environmental Field Test of Grenades
- (2) REQUESTED BY: ETD
- (3) FIRST REPORTED: Oct 59
- (4) PROBLEM: To derive statistically the optimum allocation of
grenades to various sites for environmental field testing.
- (5) WORK ACCOMPLISHED SINCE LAST REPORT: None
- (6) WORK PLANNED FOR NEXT PERIOD: None
- (7) COMMENTS: C-E-I-R proposes to omit this problem from current
program.
- (8) ESTIMATED COMPLETION DATE: Completed